

WHAT IS CLAIMED IS:

1. A prosthetic knee, comprising:

a femoral component having a hinge post rotatably connected thereto, said hinge post including an elongate hinge post extension aperture sized for placement of a hinge post extension therein, whereby said hinge post extension traverses a first end of said hinge post extension aperture and protrudes from a second end of said hinge post extension aperture when operably positioned therein, said first and said second ends of said hinge post extension aperture comprising opposing ends of said elongate hinge post extension aperture, said first end of said hinge post extension aperture having threads cooperating with a threaded proximal end of said hinge post extension to connect said hinge post extension to said hinge; and

a tibial component including a second hinge post extension aperture, whereby said hinge post extension is positioned within said second hinge post extension aperture when the prosthetic knee is operably assembled.
2. The prosthetic knee of Claim 1, further comprising:

a meniscal component positioned between said femoral component and said tibial component, said femoral component including a condylar bearing surface, said meniscal component including a cooperative bearing surface facing said condylar bearing surface of said femoral component, said meniscal component including a hinge post aperture, whereby said hinge post is positioned within said hinge post aperture when the prosthetic knee is operably assembled.

3. The prosthetic knee of Claim 2, wherein said tibial component includes a rotation protrusion cooperating with a cutout of said meniscal component to guide rotation of said meniscal component about a longitudinal axis of said hinge post extension.

4. The prosthetic knee of Claim 3, wherein said rotation protrusion includes a lip extending substantially parallel to a tibial tray of said tibial component, said rotation protrusion lip facing an opposing lip formed in said cutout of said meniscal component, said meniscal component lip being positioned between said tibial tray and said rotation protrusion lip.

5. The prosthetic knee of Claim 1, further comprising:
a bearing box connected to said femoral component, said bearing box interposed between said hinge post and said femoral component, whereby said hinge post will not contact said femoral component during flexion and extension of the prosthetic knee, said bearing box including a hyperextension stop, said hinge post including a hyperextension stop surface, said hyperextension stop contacting said hyperextension stop surface to prevent further hyperextension of the prosthetic knee beyond a predetermined point of hyperextension.

6. The prosthetic knee of Claim 5, wherein said hyperextension stop comprises a convex protrusion.

7. The prosthetic knee of Claim 5, wherein said hyperextension stop surface comprises a concave portion of said elongate hinge post extension aperture.

8. The prosthetic knee of Claim 5, wherein said predetermined point of hyperextension comprises four degrees of hyperextension of the prosthetic knee.

9. The prosthetic knee of Claim 2, wherein said condylar bearing surface includes a first portion and a second portion, said first portion having a first radius of

curvature, said second portion having a second radius of curvature, whereby an axis of rotation of said femoral component maintains constant during flexion and extension of the prosthetic knee when said first portion contacts said cooperative bearing surface of said meniscal component, whereby said axis of rotation of said femoral component moves away from said meniscal component when said second portion of said femoral component contacts said cooperative bearing surface of said meniscal component, whereby said second portion of said femoral component contacts said meniscal component at three degrees of hyperextension of the prosthetic knee.

10. The prosthetic knee of Claim 1, wherein said hinge post extension includes a threaded aperture

11. A prosthetic knee, comprising:

- a femoral component including a condylar bearing surface;
- a meniscal component including a cooperative bearing surface facing said condylar bearing surface of said femoral component; and
- a tibial component including a rotation protrusion cooperating with a cutout of said meniscal component to guide rotation of said meniscal component about an axis substantially perpendicular to a tibial tray of said tibial component, said rotation protrusion including a lip extending substantially parallel to said tibial tray of said tibial component, said rotation protrusion lip facing an opposing lip formed in said cutout in said meniscal component, said meniscal component lip being positioned between said tibial tray and said rotation protrusion lip.

12. The prosthetic knee of Claim 11, wherein said femoral component includes a hinge post rotatably connected thereto, said hinge post including an elongate hinge post extension aperture sized for placement of a hinge post extension therein, whereby said hinge

post extension traverses a first end of said hinge post extension aperture and protrudes from a second end of said hinge post extension aperture when operably positioned therein, said first end and said second end of said hinge post extension aperture comprising opposing ends of said elongate hinge post extension aperture, said tibial component including a second hinge post extension aperture, whereby said hinge post extension is positioned within said second hinge post extension aperture when the prosthetic knee is operably assembled, said meniscal component including a hinge post aperture, whereby said hinge post is positioned within said hinge post aperture when the prosthetic knee is operably assembled.

13. The prosthetic knee of Claim 11, wherein said cutout in said meniscal component is sized whereby said rotation protrusion cooperates with said cutout, to limit rotation of said meniscal component about said axis to a total of 60° of rotation.

14. A prosthetic knee, comprising:

- a femoral component including a condylar bearing surface;
- a meniscal component including a cooperative bearing surface facing said condylar bearing surface of said femoral component; and
- a tibial component including an anterior rotation protrusion, and a posterior rotation protrusion cooperating with an anterior cutout and a posterior cutout of said meniscal component, respectively, to guide rotation of said meniscal component about an axis substantially perpendicular to a tibial tray of said tibial component, said anterior rotation protrusion including an anterior lip extending substantially parallel to said tibial tray of said tibial component, said posterior rotation protrusion including a posterior lip extending substantially parallel to said tibial tray of said tibial component, said anterior rotation protrusion lip facing an anterior opposing lip formed in said anterior cutout of said meniscal component, said anterior meniscal component lip being positioned between said tibial tray

and said anterior rotation protrusion lip, said posterior rotation protrusion lip facing a posterior opposing lip formed in said posterior cutout of said meniscal component, said posterior meniscal component lip being positioned between said tibial tray and said posterior rotation protrusion lip.

15. The prosthetic knee of Claim 13, wherein said femoral component includes a hinge post rotatably connected thereto, said hinge post including an elongate hinge post extension aperture sized for placement of a hinge post extension therein, whereby said hinge post extension traverses a first end of said hinge post extension aperture and protrudes from a second end of said hinge post extension aperture when operably positioned therein, said first end and said second end of said hinge post extension aperture comprising opposing ends of said elongate hinge post extension aperture, said tibial component including a second hinge post extension aperture, whereby said hinge post extension is positioned within said second hinge post extension aperture when the prosthetic knee is operably assembled, said meniscal component including a hinge post aperture, whereby said hinge post is positioned within said hinge post aperture when the prosthetic knee is operably assembled.

16. The prosthetic knee of Claim 13, wherein said anterior cutout in said meniscal component and said posterior cutout in said meniscal component are both sized whereby said anterior rotation protrusion in said posterior rotation protrusion cooperate with said anterior cutout and said posterior cutout, respectively to limit rotation of said meniscal component about said axis substantially perpendicular to said tibial tray to a total of 60° of rotation.